

REMARKS

Claims 1, 3-7, 18, 19, 28 and 29 are pending in the above-identified application. Claims 1, 3-7, 18, 19, 28 and 29 were rejected. With this Amendment, claims 1, 5, 6, and 18 were amended. Accordingly, claims 1, 3-7, 18, 19, 28 and 29 are at issue in the above-identified application.

35 U.S.C. § 103 Obviousness Rejection of Claims

Claims 1, 3-7, 18-19, 28-29 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Shimizu et al.* (U.S. Patent No. 6,386,668) in view of *Allen et al.* (U.S. Patent No. 5,469,199). Applicants respectfully traverse this rejection.

Amended claim 1, from which claims 3 and 4 depend, recites a printer comprising at least one ink-ejecting mechanism, the at least one ink-ejecting mechanism having a printer head *having a print width*, a plurality of head chips formed on the printer head, and a plurality of nozzles formed within a plurality of nozzle arrays positioned on a *single* nozzle plate, the plurality of nozzles associated with each head chip. Additionally, claim 5 recites a printer head *having a print width* comprising at least one ink-ejecting mechanism, at least one head at least one head chip formed on the at least one ink-ejecting mechanism, and a plurality of nozzles formed within a plurality of nozzle arrays positioned on a *single* nozzle plate, the plurality of nozzles associated with each head chip. Additionally, claim 6, from which claim 7 depends, recites a printer for ejecting ink droplets from predetermined nozzles to form an image onto a print object, comprising at least one ink-ejecting mechanism, the at least one ink-ejecting mechanism having a printer head *having a print width*, at least one head chip formed on the printer head, the at least one head chip being formed in an array pattern on the printer head, and a plurality of nozzles formed on a *single* nozzle plate in a nozzle array. Claim 18, from which

claim 19 depends, recites a printer head *having a print width*, comprising at least one ink-ejecting mechanism, at least one head chip formed on the printer head, the at least one head chip being formed in an array pattern on the printer head, and a plurality of nozzles formed on a *single* nozzle plate in a nozzle array.

None of the above references, either alone or in combination, teach a device having a printer head *having a print width*, wherein a plurality of nozzles formed within a plurality of nozzle arrays positioned on a single nozzle plate or a plurality of nozzles formed on a single nozzle plate in a nozzle array.

For example, *Allen et al.* discloses a wide inkjet printhead having a plurality of printheads 10 wherein each printhead has its own nozzle member 18, however it requires a plurality of printheads in order to form a print width, wherein the present invention requires a *single* printer head having a print width and a plurality of head chips which are formed on the printer head and a plurality of nozzles formed within a plurality of nozzle arrays positioned on a *single* nozzle plate instead of a plurality of nozzle plates.

Thus, in order for the printer head disclosed in *Allen et al.* to be wide enough, as the print object would require, *Allen et al.* uses a plurality of printheads 10, which each require a nozzle plate. Accordingly, if misplacement occurs amongst adjacent printheads 10, it is not possible to effectively prevent deterioration of print quality, since a number of nozzle plates are used. As a consequence, *Allen et al.* does not disclose having a single nozzle plate for use with a printer head *having a print width*.

Additionally, *Shimizu et al.* discloses an ink jet recording apparatus having an ink jet recording head 23 comprising three head units 231, 232 and 233, each having a large number of ink nozzles 23a arranged in line, at a given pitch, which are adhered to a common plate 234.

(See column 4, lines 29-32 and Fig. 3). *Shimizu et al.* does not teach forming a plurality of nozzles within a plurality of nozzle arrays positioned on a nozzle plate, but rather teaches three head units, each having a number of ink nozzles wherein the head units are adhered to a common plate, but not all formed on a plate. Since the three head units are not formed on a single plate, it is difficult to accurately align the head units 231, 232 and 233 with respect to each other and this may lead to a deterioration of print quality amongst these three head units. Either way, *Shimizu et al.* does not teach forming a plurality of nozzle arrays positioned on a nozzle plate.


Accordingly, Applicants submit that the claimed invention is not anticipated by nor obvious over the applied references, either alone or in combination. Withdrawal of this rejection is respectfully requested.

With respect to claims 28 and 29, both claims require at least one ink ejecting mechanism for ejecting pre-determined *colors* of ink droplets from predetermined nozzles sequentially placed to form a head chip and as many of said head chips as necessary for said *predetermined colors* said head chip aligned formed said printer head, wherein said nozzles are formed on a nozzle plate. Applicants submit that the claimed invention is not anticipated by nor obvious over the applied references, either alone or in combination.

In view of the foregoing, Applicants submit that the application is in condition for allowance. Notice to that effect is requested.

Respectfully submitted,

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